EXHIBIT A

COMMONWEALTH OF PENNSYLVANIA
GOVERNOR'S OFFICE

LARRY A. OLSON
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April 29, 1996

Commissioner David W. Rolka
Pennsylvania Public Utility Commission
Room 110
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Dear Commissioner Rolka:

I am writing to respond to three recent and related contacts from the PUC and your office: (1) your correspondence to me of March 19, 1996; (2) a telephone conversation on March 28, 1996, between yourself and Nick Giordano, of my staff; and (3) correspondence from the Commission's Deputy Executive Director, Otto F. Hofmann, dated March 19, 1996, to Office of Chief Counsel for the Departments of Education and Health. It is my understanding that in each of these, the PUC was seeking input for a response to the FCC regarding the Universal Service provisions of the 1996 amendment to the federal Communications Act.

First, I want to express my appreciation for your efforts to seek input on the issues of universal service, particularly those raised by the 1996 Act involving rural health care, education and libraries. The Office for Information Technology is coordinating the response for the Ridge Administration and the Commonwealth's Departments of Education and Health.

The Commonwealth of Pennsylvania would like to provide the following comments as input to the joint commission established to implement the provisions of Section 254 of the Telecommunications Act of 1996 regarding Universal Service Requirements.

Pennsylvania is a state with a significant rural population: 42 of 67 counties are designated as rural; 4 million residents live in rural areas. While 31% of the total Pennsylvania population is rural, only 12% of our primary care physicians practice in rural areas; even fewer medical specialists practice there. To attract and retain more primary care providers in rural areas, and to improve the quality of care available to them and to their patients, Pennsylvania has conducted a pilot program, PA HealthNet, which seeks to employ the power of telecommunications to overcome the problems of distance and remoteness which adversely affect rural health care in our state. To pilot telemedicine, teleradiology, and desktop medical conferencing in rural health care, the state government has had

to use its private network to deliver the telecommunications service required. The pilots have proved the technology, but the public network infrastructure in our state does not provide a universal level of service. There is variance among the local exchange companies (LECs) in the technology available; there is even wider variance on the rates charged by the LECs, especially for access. This is particularly true when comparing the rates and technology options available in rural communities, where distance sensitive access rate structures make service options less affordable then those available in our urban centers. While some LECs serving some rural communities can meet the service and affordable rate requirements, some cannot or do not. It is this variance which leads us to conclude that our state's public network infrastructure cannot sustain these applications, at present. Our experience in testing the level of telecommunications necessary for the PA HealthNet pilot leads us to believe that digital broadband, switchable services must be more universally available, at more affordable rates, then the current situation in order to support rural health care.

Improving basic education in Pennsylvania is perhaps the highest priority of Governor Ridge. The Governor's proposed budget for fiscal 1996/97 contains a major initiative for improving Pennsylvania's educational technology infrastructure. If approved by the Legislature, we will commit $121 million over a three year period for the purpose of creating a Pennsylvania Education Network in partnership with local school districts, our higher education institutions, and private enterprise. This network will be community-based, and it will provide information technology opportunities for all Pennsylvanians. Bringing this vision to reality in rural areas will present one of our greatest challenges. Again, we strongly believe that Universal Service needs to be defined in a way which makes this goal achievable in our highly rural state by providing advanced, digital broadband services and rates which are reasonably comparable among urban and rural communities and among the LECs.

As noted, Pennsylvania state government has already committed significant resources to bring advanced telecommunications to rural areas to support both rural health care and education, but we cannot do it alone. The public network infrastructure needs to make available the types of services which are only universally available and affordable now on our private network.

Based upon our experience, here are the aspects of service we would recommend be included in the definition of Universal Service to address the needs of education and rural health care.

(1) Digital services must be available. Further, these services should be based on telecommunications technologies which are switchable, which create scalable service options, and which adhere to open systems standards. Examples:

- ISDN, both Basic Rate and Primary Rate services with access to broadband ISDN backbone networks;
- Frame Relay and SMDS as data only service options,
- ATM (Asynchronous Transfer Mode) service, both as a direct service interface and as a backbone concentration technology (e.g., the ability to aggregate Frame Relay access onto an ATM backbone). ATM should allow schools and health care providers to integrate voice, data, image, and video applications on a single telecommunications service.

(2) Applications key to both the distance learning needs of education and the remote diagnostic needs of health care providers in rural areas require that digital bandwidth be available at multiple

levels: fractional T1, T1, and super T1

- Compressed, two-way interactive video, with the picture quality and motion resolution quality necessary for advanced applications like telemedicine, requires access to a minimum bandwidth of 384 Kbps (336 Kbps ISDN), equivalent to one quarter T1 or three BRI ISDN channels. These qualities are crucial to the diagnostic quality of the video needed to support remote consultations between primary care physicians in rural areas and medical sub-specialists. In education, some distance learning applications, such as foreign language instruction, require the higher compressed video speeds for providing both high quality picture and well synchronized audio.
- Diagnostic image quality needed for teleradiology requires access to minimum bandwidth of 1.544 Mbps or more, equivalent to a single T1 circuit or to a "super T1," usually scaling from about 4.6 Mbps to 34 Mbps. Teleradiology involves the transfer of dense, digitized images from X-ray, MRI, CAT Scan, and nuclear medicine equipment for the purpose of remote diagnosis and consultation.
- GIS image transfers are dense, digitized images of geographic detail important to several types of basic education level instruction.

(3) To support applications critical to the Universal Access goals for education and rural health care, a telecommunications infrastructure capable of very broadband transmission must be deployed. SONET standards are open system standards intended to provide broadband ISDN. They also provide the necessary, basic transport for open system switching technologies, such as ATM. For some distance learning applications, DS3 (45 Mbps) access bandwidth is required to provide broadcast quality video.

- To support multiple DS3 connections, SONET transport at OC3 (155.5 Mbps), OC12 (622 Mbps), and OC48 (2.48 Gbps) capacities must be available on a backbone network.
- Local and state governments which support public education and public health may need access at OC3, even OC12 speeds to support these applications and to provide service to rural areas.

We thank the Federal Communications Commission and the Pennsylvania Public Utility Commission for the opportunity to offer our comments for your review. We hope that we may continue to provide input into this very important process.

We also look forward to the continued opportunity of working with the Pennsylvania Public Utility Commission in reviewing the implications and developments of federal and state deregulation to the provision of telecommunications service to the education, library, and rural health care providers in Pennsylvania.

Again, thank you for your invitation to work together.

Sincerely,

Larry A. Olson

cc Chairman John M. Quain, Pennsylvania Public Utility Commission
Commissioner Robert K. Bloom, Pennsylvania Public Utility Commission
Commissioner Lisa Crutchfield, Pennsylvania Public Utility Commission
Commissioner John Hanger, Pennsylvania Public Utility Commission
Otto F. Hofmann, Deputy Executive Director, Pennsylvania Public Utility Commission
Honorable Eugene W. Hickok, Secretary of Education
Honorable Daniel F. Hoffmann, Acting Secretary of Health
Honorable Thomas G. Paese, Secretary of Administration

CERTIFICATE OF SERVICE

I hereby certify that the foregoing REPLY COMMENTS OF THE PENNSYLVANIA PUBLIC UTILITY COMMISSION have been served this 8th day of May, 1996, upon all parties listed on the attached service list by first class mail, postage-prepaid.

Executed at Harrisburg, Pennsylvania, this 7th day of May, 1996.

Maureen A. Scott

Counsel for the Pennsylvania
Public Utility Commission

Attachment: Service List

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